Data Validation Checklist
Semivolatile Organic Analyses

Project:	35TH Avenue Superfund Site	Project No:	60430028; 1
Laboratory:	TestAmerica – Savannah, GA	Job ID.:	680-106200-2
Method:	SW-846 8270D Low-Level (PAH)	Associated Samples:	Refer to **Attachment A** (Sample Summary)
Matrix:	Soil	Samples Collected:	10/09/2014
Reviewer:	Karen M Trujillo, URS Group, Inc.	Date:	08/07/2015
Concurrence[1]:	Jenine Abbassi, URS Group, Inc.	Date:	08/14/2015

Review Questions	Yes	No	N/A	Samples (Analytes) Affected/Comments	Flag
1. Were sample storage and preservation requirements met? If temperature >6°C, then J/UJ flag results.	✓				
2. Were all COC records signed and integrity seals intact, indicating that COC was maintained for all samples?	✓				
3. Were there any problems noted in laboratory data package concerning condition of samples upon receipt?		✓			
4. Do any soil samples contain more than 50% water? If yes, then results are to be reported on a wet-weight basis.		✓			
5. Were holding times met (≤7 and 14 days from collection to extraction for aqueous and solid samples, respectively; ≤40 days from extraction to analysis)? If not, then J/UJ flag sample results. If grossly (2x) exceeded, then flag J/R.	✓				
6. Were results for all project-specified target analytes reported?	✓				
7. Were project-specified Reporting Limits achieved for undiluted sample analyses?	✓				
8. Were samples with analyte concentrations exceeding the calibration range of the instrument re-analyzed at a higher dilution? If not, then J flag sample result.	✓				
9. Was a method blank extracted with each batch (i.e., one per 20 samples, per batch, per matrix and per level)?	✓				
10. Were target analytes detected in the method blank?		✓			
11. Are equipment/rinsate blanks associated with every sample? If no, note in DV report.		✓		According to the QAPP, a rinsate blank is to be collected after each decontamination event, which occurs once per week per the client. A rinsate blank is not associated with this sampling event. Blank contamination will be evaluated based on method blank results.	
12. Were target analytes detected in equipment/rinsate blanks?			✓		
13. Were analytes detected in samples below the blank contamination action level? If yes, U flag positive sample results <5x associated blank concentration (10x for common blank contaminants–phthalates)			✓	Blank contamination does not exist.	

[1] Independent technical reviewer

Data Validation Checklist (Continued)

Review Questions	Yes	No	N/A	Samples (Analytes) Affected/Comments	Flag
14. Is a field duplicate associated with this Job?	✓			CV0971WW-CSD6 (680-106200-19) is a field duplicate of sample CV0971WW-CS6 (680-106200-18).	
15. Was precision deemed acceptable as defined by the project plans?	✓			Refer to **Attachment B** (Field Duplicate Evaluation)	
16. Were DFTPP ion abundance criteria (i.e., Table 3 of SW-846 8270D) met? If no, professional judgment may be applied to determine to what extent the data may be utilized.	✓			Alternate tuning criteria were used by the laboratory (i.e., EPA Method 525.2). All ion abundance criteria were met per EPA Method 525.2.	
17. Were samples analyzed within 12 hours of the DFTPP tune? If no, professional judgment may be applied to determine to what extent the data may be utilized.	✓				
18. Were initial and continuing calibration standards analyzed at the proper frequency for each instrument? • Ensure that a minimum of five standards are used for the initial calibration. If no, use professional judgment to determine the effect on the data and note in the reviewer narrative. • An initial calibration is to be associated with each sample analysis. • A continuing calibration standard is to be analyzed for every 12 hours of sample analysis per instrument.	✓			• Instrument ID: CMSY • Initial Calibration: 10/07/2014 • ICV: 10/07/14 @ 16:25 • CCV: 10/15/14 @ 13:05 & 10/16/2014 @ 09:29	
19. Were calibration results within laboratory/project specifications? • ICAL (Criteria: $\leq$20 mean %RSD ($\leq$50% for poor performers), OR r$\geq$0.995, OR $r^2\geq$0.99, and RRF $\geq$0.050 ($\geq$0.010 for poor performers)): o If %RSD>20 (>50% for poor performers), or r <0.995, or r^2 <0.995, then J flag positive results and UJ flag non-detects o If mean RRF <0.050 (<0.010 for poor performers), then J flag positive results and R flag non-detects (unless the lab analyzed a detectability check standard) • ICV and CCV (ICV Criteria: $\leq \pm$30%D; CCV Criteria: $\leq \pm$20%D ($\leq$50% for poor performers) and RF $\geq$0.050 ($\geq$0.010 for poor performers)): o If %D> Control Limit (>50% for poor performers), then J flag positive results and UJ flag non-detects o If RF <0.050 (<0.010 for poor performers), then UJ flag non-detected semivolatile target compounds	✓				
20. Was a LCS prepared for each batch and matrix?	✓				
21. Were LCS recoveries within lab control limits? If no, J flag positive results when %R >Upper Control Limit (UCL) and J/R flag results when %R <Lower Control Limit (LCL).	✓				
22. Were LCS/LCSD RPD within lab specifications? If no, J flag positive results and UJ flag non-detects			✓	LCS only	
23. Was a MS/MSD pair extracted at the proper frequency (one per 20 samples per batch)?	✓				

Data Validation Checklist (Continued)

Review Questions	Yes	No	N/A	Samples (Analytes) Affected/Comments	Flag
24. Is the MS/MSD parent sample a project-specific sample?	✓	✓		• Batch 353328: 680-106200-18 (CV0971WW-CS6), MS/MSD • Batch 353328: (Batch Sample), MS/MSD. Lab sample 680-106200-A-1 is a project-specific sample (CV0005Y-CS6) and results were reported under Job ID 680-106200-1.	
25. For all analytes with native sample concentrations < 4 x spiking level, were MS and MSD recoveries within laboratory/project specifications? *Only QC results for project samples that are reported under this Job ID are evaluated.* • If the native sample concentration > 4x spiking level, then an evaluation of interference is not possible. • If either MS or MSD recovery meets control limits, qualification of data is not warranted. • MS and MSD %R<10: J and R Flag positive and ND results, respectively • MS and MSD %R >10 and <LCL: J Flag positive and UJ flag non-detect results • MS and MSD R% >UCL (or 140): J Flag positive results		✓		680-106200-18 (CV0971WW-CS6): • Benzo[a]anthracene MS and MSD @-21 and 200 %R (Lab/Project: 39-157) • Benzo[a]pyrene MS and MSD @-2 and 201 %R (Lab/Project: 41-158) • Benzo[g,h,i]perylene MS and MSD @-0.6 and 175 %R (Lab/Project: 32-150) • Benzo[k]fluoranthene MS and MSD @33 and 167 %R (Lab/Project: 38-148) • Indeno[1,2,3-cd]pyrene MS and MSD @26 and 182 %R (Lab/Project: 35-148) • Phenanthrene MS and MSD @-56 and 315 %R (Lab/Project: 40-135%R) Results for the above-mentioned analytes are estimated (J-flagged) in sample CV0971WW-CS6 and field duplicate CV0971WW-CD6 (680-106200-19) due to matrix interference. Qualification of CV0971WW-CS6 data is not warranted for the following analyte, as the MSD recovery met control limits: • Dibenz(a,h)anthracene MS and MSD @-13 and 76 %R (Lab/Project: 32-155)	J
26. For all analytes with native sample concentrations < 4 x spiking level, were laboratory criteria met for precision during the MS and MSD analyses? *Only QC results for project samples that are reported under this Job ID are evaluated.* • If the native sample concentration > 4x spiking level, then an evaluation of interference is not possible. • If %RPD > UCL, J flag positive result and UJ flag non-detect result		✓		680-106200-18 (CV0971WW-CS6): • Benzo[g,h,i]perlyene @ 53%RPD (Lab/Project: <50%RPD) • Chrysene @ 57%RPD (Lab/Project: <50%RPD) • Dibenz(a,h)anthracene @ 76%RPD (Lab/Project: <50%RPD) • Fluoranthene @ 59%RPD (Lab/Project: <50%RPD) • Indeno[1,2,3-cd]pyrene @ 53%RPD (Lab/Project: <50%RPD) • Phenanthrene @ 81%RPD (Lab/Project: <50%RPD) • Pyrene @ 62%RPD (Lab/Project: <50%RPD) Results for the above-mentioned analytes are estimated (J-flagged) in sample CV0971WW-CS6 and field duplicate CV0971WW-CD6 (680-106200-19) due to matrix interference.	J
27. Were surrogate recoveries within lab/project specifications? • If %R for 1 Acid or BN surrogates <10, then J flag positive and R flag non-detect associated sample results (i.e., acid or BN results) • If 2 or more Acid or BN %R >UCL, then J flag positive associated sample results (i.e., acid or BN results) • If 2 or more Acid or BN %R ≥10%, but <LCL, then J flag		✓		Surrogate o-terphenyl was not recovered (0%) during the diluted analysis of samples 680-106200-18 through -21, -23, and -27. Qualification of sample results is not warranted, as the surrogate compound was diluted out of the samples.	

Data Validation Checklist (Continued)

Review Questions	Yes	No	N/A	Samples (Analytes) Affected/Comments	Flag
positive and UJ flag non-detect associated sample results (i.e., acid or BN results) • If 2 or more Acid or BN , with 1 %R >UCL and 1 %R ≥10%, but <LCL, then J flag positive and UJ flag non-detect associated sample results (i.e., acid or BN results)					
28. Were internal standard (IS) results within lab/project specifications? • If IS area counts are less than 50% of the midpoint calibration standard, then J flag positive and UJ flag non-detect associated sample results • If IS area counts are greater than 100% of the midpoint calibration standard, then J flag positive results • If extremely low area counts are reported or performance exhibits a major abrupt drop-off, then a severe loss of sensitivity is indicated, J flag positive and R flag non-detect results • If retention time of sample's internal standard is not within 30 seconds of the associated calibration standard, R flag associated data. • The chromatographic profile for that sample must be examined to determine if any false positives or negatives exists. For shifts of large magnitude, the reviewer may consider partial or total rejection of the data for that sample fraction. Positive results need not be qualified as R, if mass spectral criteria are met.	✓				
29. Were lab comments included in report?	✓			Refer to **Attachment C** (Case Narrative)	
Comments: The data validation was conducted in accordance with the *Non-Industrial Use Property Sampling Event QAPP for the 35th Avenue Removal Site, Birmingham, Alabama, Revision 1* (OTIE, October 2012). The data review process was modeled after the *USEPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic Methods Data Review* (EPA, October 1999) and *USEPA CLP NFG for Low Concentration Organic Methods Data Review* (EPA, June 2001). Sample results have been qualified based on the results of the data review process (**Attachment D**). Criteria for acceptability of data were based upon available site information, analytical method requirements, guidance documents, and professional judgment.					

DV Flag Definitions:

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
R The sample results are unusable. The analyte may or may not be present in the sample.
U The analyte was analyzed for, but was not detected above the associated level; blank contamination may exist.
UJ The analyte was not detected above the limit, and the limit is approximate and may be inaccurate or imprecise.

ATTACHMENT A

SAMPLE SUMMARY

SAMPLE SUMMARY

Client: Oneida Total Integrated Enterprises LLC

Job Number: 680-106200-2
Sdg Number: 680-106200-02

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-106200-18	CV0971WW-CS6	Solid	10/09/2014 1340	10/11/2014 0933
680-106200-18MS	CV0971WW-CS6	Solid	10/09/2014 1340	10/11/2014 0933
680-106200-18MSD	CV0971WW-CS6	Solid	10/09/2014 1340	10/11/2014 0933
680-106200-19	CV0971WW-CSD6	Solid	10/09/2014 1340	10/11/2014 0933
680-106200-20	CV0971WW-CS12	Solid	10/09/2014 1350	10/11/2014 0933
680-106200-21	CV0971WW-CS18	Solid	10/09/2014 1400	10/11/2014 0933
680-106200-22	CV0971WW-CS24	Solid	10/09/2014 1410	10/11/2014 0933
680-106200-23	CV0005AC-CS6	Solid	10/09/2014 1010	10/11/2014 0933
680-106200-24	CV0005AC-CS12	Solid	10/09/2014 1020	10/11/2014 0933
680-106200-25	CV0005AC-CS18	Solid	10/09/2014 1030	10/11/2014 0933
680-106200-26	CV0005AC-CS24	Solid	10/09/2014 1040	10/11/2014 0933
680-106200-27	CV0748WW-CS6	Solid	10/09/2014 1240	10/11/2014 0933
680-106200-28	CV0748WW-CS12	Solid	10/09/2014 1250	10/11/2014 0933
680-106200-29	CV0748WW-CS18	Solid	10/09/2014 1300	10/11/2014 0933
680-106200-30	CV0748WW-CS24	Solid	10/09/2014 1310	10/11/2014 0933

ATTACHMENT B

FIELD DUPLICATE EVALUATION

Evaluation of Field Duplicate Results **Attachment B**

Analyte	CV0971WW-CS6 680-106200-18		RL	CV0971WW-CSD6		RL	Unit	Avg. RLx5	RPD	Absolute difference	2x Avg RL	Action
1-Methylnaphthalene	99		76	120	J	150	µg/kg	565	NA	21	226	None, absolute difference ≤ 2x Avg RL
2-Methylnaphthalene	110		76	130	J	150	µg/kg	565	NA	20	226	None, absolute difference ≤ 2x Avg RL
Acenaphthene	64		76	96	J	150	µg/kg	565	NA	32	226	None, absolute difference ≤ 2x Avg RL
Acenaphthylene	160		76	190		150	µg/kg	565	NA	30	226	None, absolute difference ≤ 2x Avg RL
Anthracene	230		76	200		150	µg/kg	565	NA	30	226	None, absolute difference ≤ 2x Avg RL
Benzo(a)anthracene	1400		76	1100		150	µg/kg	565	24	NA	NA	None, RPD ≤ 50%
Benzo(a)pyrene	1300		76	1300		150	µg/kg	565	0	NA	NA	None, RPD ≤ 50%
Benzo(b)fluoranthene	1900		76	2000		150	µg/kg	565	5	NA	NA	None, RPD ≤ 50%
Benzo(g,h,i)perylene	930		76	830		150	µg/kg	565	11	NA	NA	None, RPD ≤ 50%
Benzo(k)fluoranthene	870		76	690		150	µg/kg	565	23	NA	NA	None, RPD ≤ 50%
Chrysene	1600		76	1500		150	µg/kg	565	6	NA	NA	None, RPD ≤ 50%
Dibenzo(a,h)anthracene	450		76	310		150	µg/kg	565	NA	140	226	None, absolute difference ≤ 2x Avg RL
Fluoranthene	2400		76	1900		150	µg/kg	565	23	NA	NA	None, RPD ≤ 50%
Fluorene	81		76	85	J	150	µg/kg	565	NA	4	226	None, absolute difference ≤ 2x Avg RL
Indeno(1,2,3-cd)pyrene	720		76	620		150	µg/kg	565	15	NA	NA	None, RPD ≤ 50%
Naphthalene	100		76	110	J	150	µg/kg	565	NA	10	226	None, absolute difference ≤ 2x Avg RL
Phenanthrene	1200		76	920		150	µg/kg	565	**26**	NA	NA	None, RPD ≤ 50%
Pyrene	2500		76	2400		150	µg/kg	565	4	NA	NA	None, RPD ≤ 50%

Note: If the analyte was not detected, then the cell was left blank.

µg/kg - micrograms per kilogram
J - Estimated value
NA - Not applicable
RL - Reporting limit
RPD - Relative percent difference

Precision is based on either the absolute difference between sample results or RPD. If the sample results are less than or equal to 5x's the RL, then precision is based on the absolute difference between duplicate results. If sample results >5x's RL, then precision is evaluated using RPD. J-Flag sample results whenever the absolute difference is greater than the RL (2x for soils) or the RPD >20% (50% for soil). Table above presents the results for detected analytes only.

ATTACHMENT C

CASE NARRATIVE

CASE NARRATIVE
Client: Oneida Total Integrated Enterprises LLC
Project: 35th Avenue Superfund Site
Report Number: 680-106200-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

No additional analytical or quality issues were noted, other than those described below or in the Definitions/Glossary page.

RECEIPT

The samples were received on 10/11/2014 9:33 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 0.8º C, 1.8º C, 4.8º C and 5.2º C.

SEMIVOLATILE ORGANIC COMPOUNDS (GC/MS) LOW LEVEL PAH

Samples CV0971WW-CS6 (680-106200-18), CV0971WW-CSD6 (680-106200-19), CV0971WW-CS12 (680-106200-20), CV0971WW-CS18 (680-106200-21), CV0971WW-CS24 (680-106200-22), CV0005AC-CS6 (680-106200-23), CV0005AC-CS12 (680-106200-24), CV0005AC-CS18 (680-106200-25), CV0005AC-CS24 (680-106200-26), CV0748WW-CS6 (680-106200-27), CV0748WW-CS12 (680-106200-28), CV0748WW-CS18 (680-106200-29) and CV0748WW-CS24 (680-106200-30) were analyzed for Semivolatile Organic Compounds (GC/MS) Low level PAH in accordance with EPA SW846 Method 8270D.

Method(s) 8270D_LL_PAH: Manual integration was performed on the following sample(s): CV0971WW-CS12 (680-106200-20), CV0971WW-CS18 (680-106200-21), CV0971WW-CSD6 (680-106200-19), CV0005AC-CS12 (680-106200-24), CV0005AC-CS18 (680-106200-25), CV0005AC-CS24 (680-106200-26), CV0005AC-CS6 (680-106200-23), CV0748WW-CS12 (680-106200-28), CV0748WW-CS18 (680-106200-29), CV0748WW-CS24 (680-106200-30), CV0748WW-CS6 (680-106200-27), CV0971WW-CS24 (680-106200-22), CV0971WW-CS6 (680-106200-18 MSD).

Method(s) 8270D_LL_PAH: The following sample(s) was diluted due to the nature of the sample matrix: CV0005AC-CS6 (680-106200-23), CV0748WW-CS6 (680-106200-27), CV0971WW-CS6 (680-106200-18 MSD), CV0971WW-CS6 (680-106200-18). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Several analytes have recovery outside criteria low for the MS of sample CV0971WW-CS6 (680-106200-18) in batch 680-353862.

Several analytes have recovery outside criteria high for the MSD of sample CV0971WW-CS6 (680-106200-18) in batch 680-353862. Several analytes exceeded the RPD limit.

Refer to the QC report for details.

METALS (ICP)

Samples CV0971WW-CS6 (680-106200-18), CV0971WW-CSD6 (680-106200-19), CV0971WW-CS12 (680-106200-20), CV0971WW-CS18 (680-106200-21), CV0971WW-CS24 (680-106200-22), CV0005AC-CS6 (680-106200-23), CV0005AC-CS12 (680-106200-24), CV0005AC-CS18 (680-106200-25), CV0005AC-CS24 (680-106200-26), CV0748WW-CS6 (680-106200-27), CV0748WW-CS12 (680-106200-28), CV0748WW-CS18 (680-106200-29) and CV0748WW-CS24 (680-106200-30) were analyzed for Metals (ICP) in accordance with EPA SW-846 Method 6010C.

Aluminum and Lead have recovery outside criteria low for the MS of sample CV0971WW-CS6 (680-106200-18) in batch 680-353949. Arsenic and Iron failed the recovery criteria high.

Iron recovery is outside criteria low for the MSD of sample CV0971WW-CS6 (680-106200-18) in batch 680-353949. Iron exceeded the RPD limit.

PERCENT SOLIDS/MOISTURE

Samples CV0971WW-CS6 (680-106200-18), CV0971WW-CSD6 (680-106200-19), CV0971WW-CS12 (680-106200-20), CV0971WW-CS18 (680-106200-21), CV0971WW-CS24 (680-106200-22), CV0005AC-CS6 (680-106200-23), CV0005AC-CS12 (680-106200-24), CV0005AC-CS18 (680-106200-25), CV0005AC-CS24 (680-106200-26), CV0748WW-CS6 (680-106200-27), CV0748WW-CS12 (680-106200-28), CV0748WW-CS18 (680-106200-29) and CV0748WW-CS24 (680-106200-30) were analyzed for Percent Solids/Moisture in accordance with TestAmerica SOP.

ATTACHMENT D

QUALIFIED SAMPLE RESULTS

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-106200-2

SDG No.: 680-106200-02

Client Sample ID: CV0971WW-CS6 | Lab Sample ID: 680-106200-18

Matrix: Solid | Lab File ID: 1YJ1611.D

Analysis Method: 8270D_LL_PAH | Date Collected: 10/09/2014 13:40

Extract. Method: 3546 | Date Extracted: 10/15/2014 10:01

Sample wt/vol: 30.04(g) | Date Analyzed: 10/16/2014 13:12

Con. Extract Vol.: 1(mL) | Dilution Factor: 10

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 12.0 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 353862 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
83-32-9	Acenaphthene	64	J	76	37
208-96-8	Acenaphthylene	160		76	37
120-12-7	Anthracene	230		76	37
56-55-3	Benzo[a]anthracene	1400	J	76	37
50-32-8	Benzo[a]pyrene	1300	J	76	14
205-99-2	Benzo[b]fluoranthene	1900		76	37
191-24-2	Benzo[g,h,i]perylene	930	J	76	37
207-08-9	Benzo[k]fluoranthene	870	J	76	23
218-01-9	Chrysene	1600	J	76	37
53-70-3	Dibenz(a,h)anthracene	450	J	76	37
206-44-0	Fluoranthene	2400	J	76	37
86-73-7	Fluorene	81		76	37
193-39-5	Indeno[1,2,3-cd]pyrene	720	J	76	37
90-12-0	1-Methylnaphthalene	99		76	35
91-57-6	2-Methylnaphthalene	110		76	37
91-20-3	Naphthalene	100		76	37
85-01-8	Phenanthrene	1200	J	76	27
129-00-0	Pyrene	2500	J	76	37

CAS NO.	SURROGATE	%REC	Q	LIMITS
84-15-1	o-Terphenyl	0	D	36-131

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-106200-2

SDG No.: 680-106200-02

Client Sample ID: CV0971WW-CSD6 | Lab Sample ID: 680-106200-19

Matrix: Solid | Lab File ID: 2YJ1528.D

Analysis Method: 8270D_LL_PAH | Date Collected: 10/09/2014 13:40

Extract. Method: 3546 | Date Extracted: 10/14/2014 10:14

Sample wt/vol: 30.03(g) | Date Analyzed: 10/15/2014 22:44

Con. Extract Vol.: 1(mL) | Dilution Factor: 20

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 12.3 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 353689 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
83-32-9	Acenaphthene	96	J	150	75
208-96-8	Acenaphthylene	190		150	75
120-12-7	Anthracene	200		150	75
56-55-3	Benzo[a]anthracene	1100	J	150	75
50-32-8	Benzo[a]pyrene	1300	J	150	27
205-99-2	Benzo[b]fluoranthene	2000		150	75
191-24-2	Benzo[g,h,i]perylene	830	J	150	75
207-08-9	Benzo[k]fluoranthene	690	J	150	46
218-01-9	Chrysene	1500	J	150	75
53-70-3	Dibenz(a,h)anthracene	310	J	150	75
206-44-0	Fluoranthene	1900	J	150	75
86-73-7	Fluorene	85	J	150	75
193-39-5	Indeno[1,2,3-cd]pyrene	620	J	150	75
90-12-0	1-Methylnaphthalene	120	J	150	71
91-57-6	2-Methylnaphthalene	130	J	150	75
91-20-3	Naphthalene	110	J	150	75
85-01-8	Phenanthrene	920	J	150	55
129-00-0	Pyrene	2400	J	150	75

CAS NO.	SURROGATE	%REC	Q	LIMITS
84-15-1	o-Terphenyl	0	D	36-131

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-106200-2

SDG No.: 680-106200-02

Client Sample ID: CV0971WW-CS12 | Lab Sample ID: 680-106200-20

Matrix: Solid | Lab File ID: 2YJ1529.D

Analysis Method: 8270D_LL_PAH | Date Collected: 10/09/2014 13:50

Extract. Method: 3546 | Date Extracted: 10/14/2014 10:14

Sample wt/vol: 30.03(g) | Date Analyzed: 10/15/2014 23:06

Con. Extract Vol.: 1(mL) | Dilution Factor: 10

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 8.4 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 353689 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
83-32-9	Acenaphthene	73	U	73	36
208-96-8	Acenaphthylene	73	U	73	36
120-12-7	Anthracene	73	U	73	36
56-55-3	Benzo[a]anthracene	51	J	73	36
50-32-8	Benzo[a]pyrene	55	J	73	13
205-99-2	Benzo[b]fluoranthene	78		73	36
191-24-2	Benzo[g,h,i]perylene	44	J	73	36
207-08-9	Benzo[k]fluoranthene	36	J	73	22
218-01-9	Chrysene	67	J	73	36
53-70-3	Dibenz(a,h)anthracene	73	U	73	36
206-44-0	Fluoranthene	80		73	36
86-73-7	Fluorene	73	U	73	36
193-39-5	Indeno[1,2,3-cd]pyrene	73	U	73	36
90-12-0	1-Methylnaphthalene	73	U	73	34
91-57-6	2-Methylnaphthalene	73	U	73	36
91-20-3	Naphthalene	73	U	73	36
85-01-8	Phenanthrene	63	J	73	26
129-00-0	Pyrene	100		73	36

CAS NO.	SURROGATE	%REC	Q	LIMITS
84-15-1	o-Terphenyl	0	D	36-131

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-106200-2

SDG No.: 680-106200-02

Client Sample ID: CV0971WW-CS18 | Lab Sample ID: 680-106200-21

Matrix: Solid | Lab File ID: 2YJ1530.D

Analysis Method: 8270D_LL_PAH | Date Collected: 10/09/2014 14:00

Extract. Method: 3546 | Date Extracted: 10/14/2014 10:14

Sample wt/vol: 30.08(g) | Date Analyzed: 10/15/2014 23:28

Con. Extract Vol.: 1(mL) | Dilution Factor: 10

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 8.1 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 353689 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
83-32-9	Acenaphthene	73	U	73	36
208-96-8	Acenaphthylene	73	U	73	36
120-12-7	Anthracene	73	U	73	36
56-55-3	Benzo[a]anthracene	170		73	36
50-32-8	Benzo[a]pyrene	180		73	13
205-99-2	Benzo[b]fluoranthene	260		73	36
191-24-2	Benzo[g,h,i]perylene	130		73	36
207-08-9	Benzo[k]fluoranthene	86		73	22
218-01-9	Chrysene	200		73	36
53-70-3	Dibenz(a,h)anthracene	68	J	73	36
206-44-0	Fluoranthene	320		73	36
86-73-7	Fluorene	73	U	73	36
193-39-5	Indeno[1,2,3-cd]pyrene	92		73	36
90-12-0	1-Methylnaphthalene	73	U	73	34
91-57-6	2-Methylnaphthalene	73	U	73	36
91-20-3	Naphthalene	73	U	73	36
85-01-8	Phenanthrene	170		73	26
129-00-0	Pyrene	340		73	36

CAS NO.	SURROGATE	%REC	Q	LIMITS
84-15-1	o-Terphenyl	0	D	36-131

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-106200-2

SDG No.: 680-106200-02

Client Sample ID: CV0971WW-CS24 | Lab Sample ID: 680-106200-22

Matrix: Solid | Lab File ID: 1YJ1612.D

Analysis Method: 8270D_LL_PAH | Date Collected: 10/09/2014 14:10

Extract. Method: 3546 | Date Extracted: 10/15/2014 10:01

Sample wt/vol: 30.01(g) | Date Analyzed: 10/16/2014 13:34

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 8.4 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 353862 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
83-32-9	Acenaphthene	7.3	U	7.3	3.6
208-96-8	Acenaphthylene	7.3	U	7.3	3.6
120-12-7	Anthracene	7.3	U	7.3	3.6
56-55-3	Benzo[a]anthracene	24		7.3	3.6
50-32-8	Benzo[a]pyrene	7.1	J	7.3	1.3
205-99-2	Benzo[b]fluoranthene	37		7.3	3.6
191-24-2	Benzo[g,h,i]perylene	20		7.3	3.6
207-08-9	Benzo[k]fluoranthene	12		7.3	2.2
218-01-9	Chrysene	25		7.3	3.6
53-70-3	Dibenz(a,h)anthracene	6.4	J	7.3	3.6
206-44-0	Fluoranthene	38		7.3	3.6
86-73-7	Fluorene	7.3	U	7.3	3.6
193-39-5	Indeno[1,2,3-cd]pyrene	14		7.3	3.6
90-12-0	1-Methylnaphthalene	7.3	U	7.3	3.4
91-57-6	2-Methylnaphthalene	7.3	U	7.3	3.6
91-20-3	Naphthalene	7.3	U	7.3	3.6
85-01-8	Phenanthrene	17		7.3	2.6
129-00-0	Pyrene	38		7.3	3.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
84-15-1	o-Terphenyl	100		36-131

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-106200-2

SDG No.: 680-106200-02

Client Sample ID: CV0005AC-CS6 | Lab Sample ID: 680-106200-23

Matrix: Solid | Lab File ID: 1YJ1613.D

Analysis Method: 8270D_LL_PAH | Date Collected: 10/09/2014 10:10

Extract. Method: 3546 | Date Extracted: 10/15/2014 10:01

Sample wt/vol: 30.05(g) | Date Analyzed: 10/16/2014 13:56

Con. Extract Vol.: 1(mL) | Dilution Factor: 10

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 8.3 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 353862 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
83-32-9	Acenaphthene	73	U	73	36
208-96-8	Acenaphthylene	73	U	73	36
120-12-7	Anthracene	73	U	73	36
56-55-3	Benzo[a]anthracene	180		73	36
50-32-8	Benzo[a]pyrene	220		73	13
205-99-2	Benzo[b]fluoranthene	360		73	36
191-24-2	Benzo[g,h,i]perylene	180		73	36
207-08-9	Benzo[k]fluoranthene	110		73	22
218-01-9	Chrysene	240		73	36
53-70-3	Dibenz(a,h)anthracene	64	J	73	36
206-44-0	Fluoranthene	270		73	36
86-73-7	Fluorene	73	U	73	36
193-39-5	Indeno[1,2,3-cd]pyrene	140		73	36
90-12-0	1-Methylnaphthalene	52	J	73	34
91-57-6	2-Methylnaphthalene	59	J	73	36
91-20-3	Naphthalene	42	J	73	36
85-01-8	Phenanthrene	170		73	26
129-00-0	Pyrene	290		73	36

CAS NO.	SURROGATE	%REC	Q	LIMITS
84-15-1	o-Terphenyl	0	D	36-131

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-106200-2

SDG No.: 680-106200-02

Client Sample ID: CV0005AC-CS12 | Lab Sample ID: 680-106200-24

Matrix: Solid | Lab File ID: 1YJ1614.D

Analysis Method: 8270D_LL_PAH | Date Collected: 10/09/2014 10:20

Extract. Method: 3546 | Date Extracted: 10/15/2014 10:01

Sample wt/vol: 30.05(g) | Date Analyzed: 10/16/2014 14:19

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 13.4 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 353862 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
83-32-9	Acenaphthene	7.7	U	7.7	3.8
208-96-8	Acenaphthylene	7.7	U	7.7	3.8
120-12-7	Anthracene	7.7	U	7.7	3.8
56-55-3	Benzo[a]anthracene	22		7.7	3.8
50-32-8	Benzo[a]pyrene	15		7.7	1.4
205-99-2	Benzo[b]fluoranthene	23		7.7	3.8
191-24-2	Benzo[g,h,i]perylene	8.9		7.7	3.8
207-08-9	Benzo[k]fluoranthene	7.9		7.7	2.3
218-01-9	Chrysene	20		7.7	3.8
53-70-3	Dibenz(a,h)anthracene	4.7	J	7.7	3.8
206-44-0	Fluoranthene	35		7.7	3.8
86-73-7	Fluorene	7.7	U	7.7	3.8
193-39-5	Indeno[1,2,3-cd]pyrene	7.4	J	7.7	3.8
90-12-0	1-Methylnaphthalene	7.7	U	7.7	3.6
91-57-6	2-Methylnaphthalene	7.7	U	7.7	3.8
91-20-3	Naphthalene	7.7	U	7.7	3.8
85-01-8	Phenanthrene	9.5		7.7	2.8
129-00-0	Pyrene	32		7.7	3.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
84-15-1	o-Terphenyl	94		36-131

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-106200-2

SDG No.: 680-106200-02

Client Sample ID: CV0005AC-CS18 | Lab Sample ID: 680-106200-25

Matrix: Solid | Lab File ID: 1YJ1615.D

Analysis Method: 8270D_LL_PAH | Date Collected: 10/09/2014 10:30

Extract. Method: 3546 | Date Extracted: 10/15/2014 10:01

Sample wt/vol: 30.01(g) | Date Analyzed: 10/16/2014 17:00

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 5.5 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 353862 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
83-32-9	Acenaphthene	7.1	U	7.1	3.5
208-96-8	Acenaphthylene	7.1	U	7.1	3.5
120-12-7	Anthracene	7.1	U	7.1	3.5
56-55-3	Benzo[a]anthracene	23		7.1	3.5
50-32-8	Benzo[a]pyrene	22		7.1	1.3
205-99-2	Benzo[b]fluoranthene	36		7.1	3.5
191-24-2	Benzo[g,h,i]perylene	20		7.1	3.5
207-08-9	Benzo[k]fluoranthene	14		7.1	2.1
218-01-9	Chrysene	27		7.1	3.5
53-70-3	Dibenz(a,h)anthracene	7.7		7.1	3.5
206-44-0	Fluoranthene	32		7.1	3.5
86-73-7	Fluorene	7.1	U	7.1	3.5
193-39-5	Indeno[1,2,3-cd]pyrene	15		7.1	3.5
90-12-0	1-Methylnaphthalene	5.2	J	7.1	3.3
91-57-6	2-Methylnaphthalene	7.2		7.1	3.5
91-20-3	Naphthalene	4.8	J	7.1	3.5
85-01-8	Phenanthrene	19		7.1	2.5
129-00-0	Pyrene	31		7.1	3.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
84-15-1	o-Terphenyl	114		36-131

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-106200-2

SDG No.: 680-106200-02

Client Sample ID: CV0005AC-CS24 | Lab Sample ID: 680-106200-26

Matrix: Solid | Lab File ID: 1YJ1616.D

Analysis Method: 8270D_LL_PAH | Date Collected: 10/09/2014 10:40

Extract. Method: 3546 | Date Extracted: 10/15/2014 10:01

Sample wt/vol: 30.02(g) | Date Analyzed: 10/16/2014 17:22

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 13.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 353862 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
83-32-9	Acenaphthene	7.7	U	7.7	3.8
208-96-8	Acenaphthylene	7.7	U	7.7	3.8
120-12-7	Anthracene	7.7	U	7.7	3.8
56-55-3	Benzo[a]anthracene	5.1	J	7.7	3.8
50-32-8	Benzo[a]pyrene	5.7	J	7.7	1.4
205-99-2	Benzo[b]fluoranthene	8.6		7.7	3.8
191-24-2	Benzo[g,h,i]perylene	5.5	J	7.7	3.8
207-08-9	Benzo[k]fluoranthene	3.2	J	7.7	2.3
218-01-9	Chrysene	7.0	J	7.7	3.8
53-70-3	Dibenz(a,h)anthracene	7.7	U	7.7	3.8
206-44-0	Fluoranthene	8.1		7.7	3.8
86-73-7	Fluorene	7.7	U	7.7	3.8
193-39-5	Indeno[1,2,3-cd]pyrene	4.4	J	7.7	3.8
90-12-0	1-Methylnaphthalene	7.7	U	7.7	3.6
91-57-6	2-Methylnaphthalene	7.7	U	7.7	3.8
91-20-3	Naphthalene	7.7	U	7.7	3.8
85-01-8	Phenanthrene	5.5	J	7.7	2.8
129-00-0	Pyrene	8.2		7.7	3.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
84-15-1	o-Terphenyl	87		36-131

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GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-106200-2

SDG No.: 680-106200-02

Client Sample ID: CV0748WW-CS6 | Lab Sample ID: 680-106200-27

Matrix: Solid | Lab File ID: 1YJ1617.D

Analysis Method: 8270D_LL_PAH | Date Collected: 10/09/2014 12:40

Extract. Method: 3546 | Date Extracted: 10/15/2014 10:01

Sample wt/vol: 30.02(g) | Date Analyzed: 10/16/2014 17:44

Con. Extract Vol.: 1(mL) | Dilution Factor: 10

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 9.9 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 353862 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
83-32-9	Acenaphthene	74	U	74	37
208-96-8	Acenaphthylene	58	J	74	37
120-12-7	Anthracene	120		74	37
56-55-3	Benzo[a]anthracene	510		74	37
50-32-8	Benzo[a]pyrene	430		74	13
205-99-2	Benzo[b]fluoranthene	620		74	37
191-24-2	Benzo[g,h,i]perylene	300		74	37
207-08-9	Benzo[k]fluoranthene	260		74	22
218-01-9	Chrysene	560		74	37
53-70-3	Dibenz(a,h)anthracene	150		74	37
206-44-0	Fluoranthene	1100		74	37
86-73-7	Fluorene	50	J	74	37
193-39-5	Indeno[1,2,3-cd]pyrene	240		74	37
90-12-0	1-Methylnaphthalene	49	J	74	34
91-57-6	2-Methylnaphthalene	59	J	74	37
91-20-3	Naphthalene	43	J	74	37
85-01-8	Phenanthrene	690		74	27
129-00-0	Pyrene	970		74	37

CAS NO.	SURROGATE	%REC	Q	LIMITS
84-15-1	o-Terphenyl	0	D	36-131

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-106200-2

SDG No.: 680-106200-02

Client Sample ID: CV0748WW-CS12 | Lab Sample ID: 680-106200-28

Matrix: Solid | Lab File ID: 1YJ1618.D

Analysis Method: 8270D_LL_PAH | Date Collected: 10/09/2014 12:50

Extract. Method: 3546 | Date Extracted: 10/15/2014 10:01

Sample wt/vol: 30.04(g) | Date Analyzed: 10/16/2014 18:06

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 14.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 353862 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
83-32-9	Acenaphthene	7.8	U	7.8	3.8
208-96-8	Acenaphthylene	7.8	U	7.8	3.8
120-12-7	Anthracene	7.8	U	7.8	3.8
56-55-3	Benzo[a]anthracene	6.9	J	7.8	3.8
50-32-8	Benzo[a]pyrene	7.8	U	7.8	1.4
205-99-2	Benzo[b]fluoranthene	13		7.8	3.8
191-24-2	Benzo[g,h,i]perylene	8.2		7.8	3.8
207-08-9	Benzo[k]fluoranthene	4.8	J	7.8	2.3
218-01-9	Chrysene	12		7.8	3.8
53-70-3	Dibenz(a,h)anthracene	7.8	U	7.8	3.8
206-44-0	Fluoranthene	7.8		7.8	3.8
86-73-7	Fluorene	7.8	U	7.8	3.8
193-39-5	Indeno[1,2,3-cd]pyrene	5.6	J	7.8	3.8
90-12-0	1-Methylnaphthalene	4.1	J	7.8	3.6
91-57-6	2-Methylnaphthalene	5.0	J	7.8	3.8
91-20-3	Naphthalene	4.7	J	7.8	3.8
85-01-8	Phenanthrene	7.6	J	7.8	2.8
129-00-0	Pyrene	8.9		7.8	3.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
84-15-1	o-Terphenyl	107		36-131

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-106200-2

SDG No.: 680-106200-02

Client Sample ID: CV0748WW-CS18 | Lab Sample ID: 680-106200-29

Matrix: Solid | Lab File ID: 1YJ1619.D

Analysis Method: 8270D_LL_PAH | Date Collected: 10/09/2014 13:00

Extract. Method: 3546 | Date Extracted: 10/15/2014 10:01

Sample wt/vol: 30.05(g) | Date Analyzed: 10/16/2014 18:28

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 15.8 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 353862 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
83-32-9	Acenaphthene	7.9	U	7.9	3.9
208-96-8	Acenaphthylene	7.9	U	7.9	3.9
120-12-7	Anthracene	7.9	U	7.9	3.9
56-55-3	Benzo[a]anthracene	6.7	J	7.9	3.9
50-32-8	Benzo[a]pyrene	6.9	J	7.9	1.4
205-99-2	Benzo[b]fluoranthene	11		7.9	3.9
191-24-2	Benzo[g,h,i]perylene	7.0	J	7.9	3.9
207-08-9	Benzo[k]fluoranthene	4.0	J	7.9	2.4
218-01-9	Chrysene	9.8		7.9	3.9
53-70-3	Dibenz(a,h)anthracene	7.9	U	7.9	3.9
206-44-0	Fluoranthene	7.5	J	7.9	3.9
86-73-7	Fluorene	7.9	U	7.9	3.9
193-39-5	Indeno[1,2,3-cd]pyrene	5.0	J	7.9	3.9
90-12-0	1-Methylnaphthalene	6.2	J	7.9	3.7
91-57-6	2-Methylnaphthalene	4.6	J	7.9	3.9
91-20-3	Naphthalene	7.9	U	7.9	3.9
85-01-8	Phenanthrene	15		7.9	2.8
129-00-0	Pyrene	9.1		7.9	3.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
84-15-1	o-Terphenyl	115		36-131

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-106200-2

SDG No.: 680-106200-02

Client Sample ID: CV0748WW-CS24 | Lab Sample ID: 680-106200-30

Matrix: Solid | Lab File ID: 1YJ1620.D

Analysis Method: 8270D_LL_PAH | Date Collected: 10/09/2014 13:10

Extract. Method: 3546 | Date Extracted: 10/15/2014 10:01

Sample wt/vol: 29.99(g) | Date Analyzed: 10/16/2014 18:51

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 12.1 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 353862 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
83-32-9	Acenaphthene	7.6	U	7.6	3.8
208-96-8	Acenaphthylene	7.6	U	7.6	3.8
120-12-7	Anthracene	7.6	U	7.6	3.8
56-55-3	Benzo[a]anthracene	6.0	J	7.6	3.8
50-32-8	Benzo[a]pyrene	4.8	J	7.6	1.4
205-99-2	Benzo[b]fluoranthene	8.9		7.6	3.8
191-24-2	Benzo[g,h,i]perylene	5.7	J	7.6	3.8
207-08-9	Benzo[k]fluoranthene	3.1	J	7.6	2.3
218-01-9	Chrysene	7.7		7.6	3.8
53-70-3	Dibenz(a,h)anthracene	7.6	U	7.6	3.8
206-44-0	Fluoranthene	5.8	J	7.6	3.8
86-73-7	Fluorene	7.6	U	7.6	3.8
193-39-5	Indeno[1,2,3-cd]pyrene	4.3	J	7.6	3.8
90-12-0	1-Methylnaphthalene	3.8	J	7.6	3.5
91-57-6	2-Methylnaphthalene	4.7	J	7.6	3.8
91-20-3	Naphthalene	4.6	J	7.6	3.8
85-01-8	Phenanthrene	7.6		7.6	2.7
129-00-0	Pyrene	6.1	J	7.6	3.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
84-15-1	o-Terphenyl	107		36-131